

## **AMENDMENTS TO THE SPECIFICATION:**

Please add the following heading before the paragraph at page 1, line 3:

### **Background of the Invention and Related Art.**

Please add the following heading before the paragraph at page 1, line 13:

### **Summary of the Invention.**

Please add the following headings and new paragraphs before the paragraph at page 1, line 25:

### **Brief Description of the Drawings.**

Fig. 1 is a schematic elevational view, partly in section, showing a two-dimensional emission device and a flexographic plate;

Fig. 2 is a schematic elevational view showing a fixed device for digitally modulating the radiation using optic semiconductors to catalyze photopolymer; and

Fig. 3 is a schematic perspective view showing a mobile device for digitally modulating the radiation using optic semiconductors to catalyze photopolymer.

### **Detailed Description of the Invention.**

Please add the following new paragraphs after the paragraph beginning at page 2, line 8:

Stereoflexography of the present invention is an improvement characterized by catalyzing (curing), liquid or solid, photopolymer plates, only, by the bottom face 2, with two different and simultaneous levels of radiation. A lower level, designed to catalyze the generation of the relief base 8, replacing "back exposure" by percentile of gray (halftone); and a maximum, designed to catalyze the generation of the printing relief 10, replacing "main exposure", creating the high relief third dimension. The latter is necessary for those photopolymer plates destined for the flexographic and stamp sectors. By applying the traditional analogical exposure equipment, based on photoliths, negative films and lamps; or processing digitally in emission devices, modulating the radiation in optic semiconductors, and replacing photoliths and negative films by LCD (Liquid Crystal Diode) or DMD (Digital Mirror Device).

The improvement is characterized by speeding up the process and reducing production time, through the use of radiation emission on one side or face of the photopolymer to be cured. For example, processing, only, by the bottom face 2 of the photopolymer plate expedites the processing.

The improvement is also characterized by eliminating the "dot gain" usually occurring in the flexographic plates. Such dot gain is caused by the effects of the refraction and persistence of radiation inside the photopolymer that thickens the top 10 of the dots when the exposure to radiation is done by the upper face 1 (main exposure) and by the bottom face 2 (back exposure), thereby damaging the resolution in these plates. By applying the emission or radiation only on the bottom face 2, the effects of refraction and persistence of radiation are inverted, sharpening the top 10 of the dot, and consequently improving resolution in the plates.

The improvement is also characterized by eliminating the "dot droop" usually occurring in the flexographic plates, which is caused by the effects of the refraction and persistence of radiation inside the photopolymer. More particularly, the sharpening of the base 9 of the dot and the thickening the top 10 of the dot, when the radiation exposure is done by the upper face 1 (main exposure) and by the bottom face 2 (back exposure), thereby weakening plate structure and reducing the durability of these plates.

By applying the emission or radiation, only on the bottom face 2, the effects of refraction and persistence of radiation are inverted, thickening the base 9 of the dot

and sharpening the top 10 of the dot, thereby reinforcing plate structure and increasing the durability of these plates.

Furthermore, stereoflexography solves problems as neatness, which is caused by processing by both the upper face (main exposure) and the bottom face (back exposure), and enables the development of new light and compact pieces of equipment to manufacture photopolymer plates in the stamp sector. Such equipment may be characterized by a fixed device, see Fig. 2, with digital modulating of the radiation in optic semiconductors, LCD (Liquid Crystal Diode) or D.M.D. (Digital Mirror Device) 21 as is necessary to catalyze the photopolymer plate 22, thereby transferring text and image files 23, to generate the printing relief 25, simultaneously with the percentile of gray (halftone) 24 to generate the relief base 26, directly from the computer 27. These improvements enable the elimination of the use of negative films and their supplies.

The elimination of "dot gain" and "dot droop" provided by stereoflexography will guarantee a high degree of neatness and longer lifetime to the flexographic plates processed in the new equipment, such as a mobile device 31 shown in Fig. 3. In device 31, the shafts 32 and 33 extend in the X and Y directions parallel to the photopolymer

plate 34. The mobile device 31 digitally processes and modulates the radiation in optic semiconductors, type LCD (liquid Crystal diode) or D.M.D. (Digital mirror device), as is necessary to catalyze the photopolymer plate 34, thereby transferring screen printing (CMYK system) of the texts and image files, to generate the printing relief 35, simultaneously, with the percentile of gray (halftone) to generate the relief base 36, directly from the computer, eliminating, in these two improvements, the use of photoliths and negative films.